

SECTION 1. Chapter NR 820 is created to read:

**Chapter NR 820  
GROUNDWATER QUANTITY PROTECTION**

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**Subchapter I - General Provisions**

**NR 820.10 Purpose.** The purpose of this chapter is to designate areas of the state in which impacts from groundwater drawdown are of such an extreme that regional planning and management is necessary to avoid, minimize and manage future impacts. This chapter shall also establish review criteria applicable to high capacity well applications involving wells situated near springs and certain high quality surface water bodies and groundwater withdrawals with high water loss.

**NR 820.11 Applicability.** This chapter applies to all counties, cities, towns, villages, utility district under s. 66.0827, Stats., that provides water, public inland lake protection and rehabilitation districts that have town sanitary district powers under s. 33.22(3), Stats., joint water authority created under s. 66.0823, Stats., or municipal water district under s. 198.22, Stats. This chapter shall also apply to persons that are owners of high capacity wells and high capacity well systems including persons that propose to construct a high capacity well.

**NR 820.12 Definitions.** The following definitions apply to terms used in this chapter:

(1) "Approval" means an approval issued by the department of natural resources prior to construction of a high capacity well in accordance with ss. 281.17(1) and 281.34(2), Wis. Stats.

(2) "Class 1 trout stream" means a stream, portion of a stream or a farm drainage ditch with a prior stream history that contains a self-sustaining population of trout and classified as such in Wisconsin Department of Natural Resources publication PUB-FH-806 2002, Wisconsin Trout Streams. Farm drainage ditches that support self-sustaining populations of trout but do not have a prior stream history are not trout streams for purposes of this chapter.

(3) "Class 2 trout stream" means a stream, portion of a stream or a farm drainage ditch with a prior stream history that contains a population of trout made up of one or more age groups, above the age one

year, in sufficient numbers to indicate substantial survival from one year to the next but in which stocking is necessary to fully utilize the available trout habitat or to sustain the fishery and classified as such in Wisconsin Department of Natural Resources publication PUB-FH-806 2002, Wisconsin Trout Streams. Farm drainage ditches that meet these criteria but do not have a prior stream history are not trout streams for purposes of this chapter.

(4) “Class 3 trout stream” means a stream or portion of a stream that has marginal trout habitat with no natural reproduction of trout occurring, requiring annual stocking of trout to provide trout fishing, and generally without carryover of trout from one year to the next and classified as such in Wisconsin Department of Natural Resources publication PUB-FH-806 2002, Wisconsin Trout Streams. Farm drainage ditches that meet these criteria but do not have a prior stream history are not trout streams for the purpose of this chapter.

(5) “Department” means the Department of Natural Resources.

(6) “Groundwater Management Area” means a multi-jurisdictional area including towns, cities, villages and counties within which the level of the potentiometric surface in any of its underlying aquifers has been reduced by 150 feet or more from the level at which the potentiometric surface would be if no groundwater withdrawals had occurred.

(7) “Groundwater Management Plan” means the plan, developed by a designated regional planning body representing the local units of government within a groundwater management area, to ensure coordinated protection, use and management of groundwater resources within the groundwater management area.

(8) “Groundwater Protection Area” means an area within 1,200 feet of any of the following:

- (a) An outstanding resource water identified under s. 281.15 that is not a trout stream.
- (b) An exceptional resource water identified under s. 281.15 that is not a trout stream.
- (c) A class I, class II, or class III trout stream, other than a class I, class II, or class III trout stream that is a farm drainage ditch with no prior stream history.

(9) “High Capacity Property” means one property on which a high capacity well system exists or is to be constructed.

(10) “High Capacity Well” means a well constructed on a high capacity property.

(11) “High Capacity Well System” means one or more wells, drillholes, or mine shafts used or to be used to withdraw water for any purpose on one property, if the total pumping or flowing capacity of all wells, drillholes or mine shafts on one property is 70 or more gallons per minute based on the pump curve at the lowest system pressure setting, or based on the flow rate.

(12) “Local governmental unit” means a city, village, town, county, town sanitary district, utility district under s. 66.0827, Stats., that provides water, public inland lake protection and rehabilitation district that has town sanitary district powers under s. 33.22(3), Stats., joint water authority created under s. 66.0823, Stats., or municipal water district under s. 198.22, Stats.

(13) "One property" means all contiguous land controlled by one owner, lessee, or any other person having a possessory interest. Lands under single ownership bisected by highways or railroad right-of-ways are considered contiguous.

(14) "Owner" means a person who owns property on which a well is located or proposed to be located or the designated representative of that person.

(15) "Potentiometric surface" means a measure of pressure of groundwater in an aquifer based on the level to which groundwater will rise in a well placed in the aquifer.

(16) "Prior stream history" means a determination made by the department that an artificial waterway or a portion of such waterway was originally a navigable stream before it was ditched or channelized.

(17) "Spring" means an area of concentrated groundwater discharge occurring at the surface of the land that results in a flow of at least one cubic foot per second at least 80 percent of the time. Spring shall include a pond that has upward flowing groundwater as its primary source of water and that has no discernible surface water inlet but has a defined surface outlet with a natural flow of at least one cubic foot per second at least 80 percent of the time. Spring shall include areas of visible diffuse groundwater seepage when the seepage becomes concentrated in a defined channel within 1200 feet of the diffuse area of seepage and the flow within the channel is at least one cubic foot per second at least 80 percent of the time. Spring does not include flowing wells as defined in s. NR 812.07(46), Wis. Adm. Code.

(18) "Water loss" means a loss of water from the basin from which it is withdrawn as a result of interbasin diversion or consumptive use or both.

(19) "Well" means any drillhole or other excavation or opening deeper than it is wide that extends more than 10 feet below the ground surface and is constructed for the purpose of obtaining groundwater.

**NR 820.13 High Capacity Wells Annual Pumping Reports.** (1) Owners of high capacity wells shall record pumpage data on a monthly basis and shall report such information to the department at no less than an annual frequency using methods and forms provided by the department. Reports of annual pumpage for a given calendar year shall be submitted to the department by the first day of March in the following calendar year.

(2) Individual reports shall be prepared for any wells with the capacity to withdraw water at a rate of 100,000 gallons per day or more.

(3) If one property does not contain any single wells with an individual capacity to withdraw water at a rate of 100,000 gallons per day or more, the annual pumpage may be reported as a composite volume for the entire property based on estimated water usage using a method prescribed by the department.

(4) If one property contains wells with individual capacity to withdraw water at a rate of at least 100,000 gallons per day and wells with maximum pumping capacity less than 100,000 gallons per day, a composite pumpage volume may be reported for those wells with individual maximum pumping capacity

less than 100,000 gallons per day based on estimated water usage using a method prescribed by the department.

### **Subchapter II – Groundwater Management Areas**

**NR 820.20 Groundwater Management Areas.** (1) The following areas are designated as groundwater management areas. Any local unit of government contained within these areas shall be considered to be part of the groundwater management area unless it is explicitly excluded.

(a) Southeast Wisconsin Groundwater Management Area consisting of the following:

1. All of Kenosha County.
2. All of Milwaukee County.
3. All of Ozaukee County.
4. All of Racine County
5. All of Waukesha County.
6. The portions of Walworth County consisting of the of the towns of East Troy, Spring Prairie, Lyons, Bloomfield, Linn and Geneva, with the exception of the village of Williams Bay and city of Elkhorn.
7. All of Washington County with the exception of the Towns of Wayne and Kewaskum.

(b) Northeast Wisconsin Groundwater Management Area consisting of the following:

1. All of Brown County
2. The portions of Calumet County consisting of the Towns of Woodville and Harrison and the city of Sherwood.
3. The portions of Outagamie County consisting of the Towns of Grand Chute, Van den Broek, Buchanan, Freedom and Kaukauna, including the cities of Appleton, Kimberly, Combined Locks, Little Chute and Kaukauna.

**NR 820.21 Groundwater Management Plans.** (1) Groundwater management plans for each groundwater management area shall be developed and submitted to the department no later than 18 months after the effective date of this administrative rule.

(2) Groundwater management plans shall be prepared by a designated regional planning body authorized to develop a plan on behalf of the local units of government contained within a groundwater management area.

(3) All local units of government situated within a groundwater management area shall comply with the groundwater management plan developed for the groundwater management area.

(4) Groundwater management plans shall consider current and future use of all groundwater resources in the groundwater management area and shall establish criteria for consideration of future withdrawals or substantial increases in existing withdrawals in the area.

(5) Groundwater management plans shall contain measurable goals and objectives. The designated regional planning body shall submit biannual progress reports to the department documenting implementation of the plan and assessing the effectiveness of the implementation including an analysis of compliance with the plan by all affected local units of government.

**NR 820.22 Approval of High Capacity Wells in Groundwater Management Areas.** (1) The department shall not approve any proposed high capacity well to be located within the area of a designated groundwater management plan unless the construction and operation of the well is consistent with the approved groundwater management plan for the groundwater management area.

### Subchapter III – Environmental Review of High Capacity Well Applications

**NR 820.30 High Capacity Wells in Groundwater Protection Areas.** (1) To the extent practicable, construction of high capacity wells within groundwater protection areas shall be avoided. If it is not physically, technically or economically feasible to site a high capacity well outside of a groundwater protection area, the application for approval shall be supplemented to include the following information:

- (a) Name of the class 1, 2 or 3 trout stream, outstanding resource water or exceptional resource water that is located within 1,200 feet of the proposed well location.
- (b) Distance from the proposed well to the trout stream, outstanding resource water or exceptional resource water.
- (c) Description of the stream channel at the point nearest to the proposed well location including stream width, depth of water and nature of the substrate.
- (d) A discussion and analysis of alternative well locations and feasibility of siting the well outside of the groundwater protection area.
- (e) Description of all other wells on the property owned by the applicant including location relative to the trout stream, or outstanding or exceptional resource water and estimated actual pumping rate and frequency of pumping for each well.

(2) Upon receipt of a complete application for a high capacity well in a groundwater protection area the department shall determine the approximate public rights stage and flow for the trout stream, or outstanding or exceptional resource water and shall estimate the percentage reduction in stream flow as a result of pumping the proposed well.

(3) If the department determines that the operation of the proposed well will not result in a reduction in stream flow to the extent that the stream flow or stage will be below the public rights stage, the department may approve the proposed well and shall include in any approval issued under s. 281.34, Stats., conditions to ensure that the well will not reduce the stream flow to a level below the public rights stage or flow.

(4) The following provisions shall apply to proposed wells that are determined to have the potential reduce stream flow to a level below the public rights stage or flow:

(a) The department shall notify the applicant that the proposed well may have a substantial impact on the stream and may require additional information concerning flow characteristics of the affected stream, site-specific geologic and hydrogeologic information and pertinent regional information.

(b) Within 60 days of receipt of a complete application the department shall identify additional informational requirements necessary to evaluate the proposed well and may determine that the applicant shall develop and submit an environmental impact report in accordance with s. NR 150.25, Wis. Adm. Code.

(c) Following receipt of the requested information the department shall prepare an environmental assessment in accordance with the procedures of s. NR 150.22, Wis. Adm. Code, and shall develop and publish a news release in accordance with s. NR 150.21, Wis. Adm. Code.

(d) If the department determines that critical resources within the stream and other uses of the stream will not be significantly adversely affected by operation of the proposed well, the department shall approve the well and include in any approval issued under s. 281.34, Stats., conditions to ensure that operation of the proposed well will not cause significant adverse impacts to critical aquatic resources or other existing uses of the stream. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures. The department may approve a proposed well that is predicted to result in a reduction of stream flow to a level below the public rights stage only if the reduction does not cause permanent and irreversible impacts to the stream, is limited to portions of the year when such a reduction will not result in substantial adverse impacts to critical resources and does not result in unreasonable detriment to other users of the stream. In the case of Class 1, 2 and 3 trout streams, flow conditions in the stream shall be maintained such that trout populations and critical habitat are not adversely affected

(e) As part of an approval under s. 281.34, Stats., the department may require the owner of the well to implement a monitoring plan to document stream flow conditions in the vicinity any well located within a groundwater protection area and based on results of the monitoring program may revise the approval issued under s. 281.34, Stats.

(f) The department shall not issue an approval under s. 281.34, Stats., for a well within a groundwater protection area unless it is able to include and includes conditions that ensure that the well does not cause significant environmental impacts.

**NR 820.31. High Capacity Wells near Springs.** (1) To the extent practicable, construction of a high capacity well near a spring shall be avoided. For any application for approval of a high capacity well under s. 281.34, Stats., the applicant shall identify and the department shall verify if there is a spring, as defined in this chapter, located in the vicinity of the proposed well.

(2) If the department determines that a proposed high capacity well is located near a spring and it is not physically, technically or economically feasible to relocate the proposed well, the department shall

assess the proposed well to determine whether construction and operation of the well will result in substantially reduced flow from the spring. The department shall consider the location of the well relative to the spring, well construction details, information regarding construction and operation of all other wells on the property, available information concerning the geology and hydrogeology of the area, historical flow data for the spring and other pertinent information.

(3) If the department determines that construction and operation of the proposed well will not result in a significant reduction in flow from the spring or cause other adverse impacts to the spring, the department may approve the proposed well and shall include in any approval issued under s. 281.34, Stats., conditions to ensure that the well will not result in significant impacts to the spring. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures.

(4) The following provisions shall apply to proposed wells that are determined to reduce flow in a spring such that significant adverse impacts to the spring or related aquatic and terrestrial resources may result:

(a) The department shall notify the applicant that the proposed well may have a substantial impact on a spring and may require additional information concerning flow characteristics of the affected spring, site-specific geologic and hydrogeologic information, a discussion and analysis of alternative well locations, and pertinent regional information.

(b) Within 60 days of receipt of a complete application the department shall identify additional informational requirements necessary to evaluate the proposed well and may determine that the applicant shall develop and submit an environmental impact report in accordance with s. NR 150.25, Wis. Adm. Code.

(c) Following receipt of the requested information the department shall prepare an environmental assessment in accordance with the procedures of s. NR 150.22, Wis. Adm. Code, and shall develop and publish a news release in accordance with s. NR 150.21, Wis. Adm. Code.

(d) If the department determines that the spring and related resources will not be significantly adversely affected by operation of the proposed well, the department shall approve the well and include in any approval issued under s. 281.34, Stats., conditions to ensure that operation of the proposed well will not cause significant adverse impacts to the spring or critical resources related to the spring. The conditions may include but are not limited to conditions as to location, depth of casing, depth of lower drillhole, depth interval of well screen, pumping capacity, pumpage schedule, months of operation, rate of flow, ultimate use and conservation measures. The department may approve a proposed well that is predicted to result in a reduction of flow in a spring only if the reduction does not cause permanent and irreversible impacts to the spring and related resources. The department may not approve a proposed high capacity well that is determined to result in a reduction in flow from a spring such that the spring

does not flow at one cubic foot per second or greater 80% of the time or that will reduce the average flow from a spring by greater than 20%.

(e) As part of an approval under s. 281.34, Stats., the department may require the owner of the well to implement a monitoring plan to document conditions of the spring and related resources and based on results of the monitoring program may revise the approval issued under s. 281.34, Stats.

**NR 820.32. Projects with High Water Loss.** (1) For any application for approval of a high capacity well under s. 281.34, Stats., the applicant shall identify and the department shall verify whether the proposed use of the well will result in an annual water loss of greater than 95%. The department may require submittal of a detailed water balance as part of the application in order to determine the approximate water loss.

(2) If the department determines that a proposed high capacity well will result in an annual water loss of greater than 95%, the department shall notify the applicant that the proposed well may result in a water loss of greater than 95%. Within 60 days of receipt of a complete application the department shall identify additional informational requirements necessary to evaluate the proposed well and may determine that the applicant shall develop and submit an environmental impact report in accordance with s. NR 150.25, Wis. Adm. Code.

(3) Following receipt of all requested information the department shall prepare an environmental assessment in accordance with the procedures of s. NR 150.22, Wis. Adm. Code, and shall develop and publish a news release in accordance with s. NR 150.21, Wis. Adm. Code.

(4) If the department determines that construction and operation of the proposed well will not result in significant environmental impacts to surface and groundwater resources, the department shall approve the well and include in any approval issued under s. 281.34, Stats., conditions to ensure that operation of the proposed well will not cause significant adverse impacts to surface water or groundwater resources.

(5) As part of an approval under s. 281.34, Stats., the department may require the owner of the well to develop and implement a water conservation and management plan that minimizes, to the extent technically and economically feasible, the degree of water loss related to operation of the high capacity well.

(6) As part of an approval under s. 281.34, Stats., the department may require the owner of the well to implement a monitoring plan to evaluate environmental impacts caused by operation of the well and based on results of the monitoring program may revise the approval issued under s. 281.34, Stats.

**NR 820.33. Public Utility Wells.** Sections NR 820.30 and 820.31 do not apply to proposed high capacity wells that are water supplies for public water systems operated by a public utility, as defined by s. 196.01, Stats., engaged in supplying water to or for the public, if the department determines that there is no other reasonable alternative location for the well and is able to include and includes in the approval conditions, which may include conditions as to location, depth, pumping capacity, rate of flow, and

ultimate use, that ensure that the environmental impact of the well is balanced by the public benefit of the well related to public health and safety.

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